



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES

In re U.S. Patent Application

Applicant: Nate Mullen

Serial No.: 09/738,024

Group Art Unit No.: 3729

Filed: 12/14/2000

Examiner: Chang, Rick Kiltae

For: METHOD OF WIRING LIGHTING FIXTURES TO ACHIEVE UNIFORM VOLTAGE  
DROP

Mail Stop Petition  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

LETTER OF TRANSMITTAL

Dear Sir and/or Madam:


Please find attached herewith (1) Appellant's Appeal Brief Submitted in triplicate  
in Response to Notice of Non-Compliance with 37 C.F.R. § 1.192(c); (2) Declaration of John  
Reeves in Support of Appellant's Appeal Brief; and (4) Acknowledgment Post Card. Please  
charge any additional fees due, or credit any overage, to Deposit Account No. 25-0050.

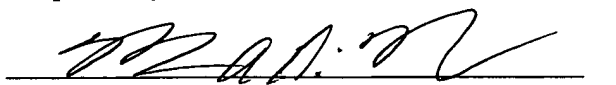
Respectfully submitted,

Dated: November 19, 2004

CERTIFICATE OF MAILING (37 CFR 1.8a)  
I hereby certify that the foregoing paper is  
being transmitted via First Class Mail to Mail Stop Appeal  
Brief - Patents, Commissioner for Patents, P.O. Box 1450  
Alexandria, Virginia 22313-1450.

Date: November 19, 2004

  
Michael DiNardo

  
Joseph A. Yanny, Patent Reg. No. 29,459  
Michael A. DiNardo, Patent Reg. No. 42,487  
YANNY & SMITH  
1925 Century Park East, Suite 1260  
Los Angeles, CA 90067  
Telephone: (310) 551-2966  
Facsimile: (310) 551-1949  
Attorneys for Applicants

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IFW

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**APPELLANT'S BRIEF**

Pursuant to 37 C.F.R. § 1.192, Appellant Nate Mullen (hereinafter "Appellant") submits the following brief in support of its appeal from the decision dated January 30, 2004 of the Primary Examiner finally rejecting claims 1-11 of the instant application for Letters Patent.

**Real Party in Interest**

Appellant, Nate Mullen, is the real party in interest.

**Related Appeals and Interferences**

There are no other related appeals or interferences known to Appellant.

**Status of Claims**

Claims 1-17 are pending in the application. Claims 12-17 are withdrawn from consideration. Claims 1-11 stand finally rejected under 35 USC § 102(b) as anticipated by U.S. Patent No. 4,937,499 issued to Hunte (hereinafter "Hunte '499"). The appendix attached hereto contains a copy of the claims involved in this appeal.

### **Status of Amendments**

An amendment was filed on August 17, 2004. Pursuant to Advisory Action mailed September 7, 2004, the amendment will be entered. The Amendment did not change the claims.

### **Summary of Invention**

An improved wiring method used for equalizing voltage delivered to each fixture in a lighting system comprising a lighting system (10) connecting a power source to a transformer (12), with a homerun wire(14). Each of the lighting fixtures (30) are directly coupled to the homerun wire (14) without passing through another connection of fixture. The fixtures (30) are coupled to the homerun wire (14) by running wire leads (32) from the fixtures (30) to the connectors (22). The wire leads (32) are of equal lengths so that each fixture (30) is an equal distance from the transformer (12). The equal distance of each fixture (30) from the transformer (12) results in equal voltage drop between the transformer (12) to the fixture (30). The only available source of voltage drop is the electrical wire itself, the electricity to each fixture (30) does not pass through any additional connections, fixtures or other sources of voltage drop prior to arriving at the intended fixture (30). Since the only source of voltage drop is the wire itself and each fixture (30) is an equal length of wire from the transformer (12), the amount of voltage drop will be uniform.

### **Issues**

Whether claims 1-11 are patentable under 35 U.S.C. § 102(b) over Hunte '499. More specifically whether Hunte '499 includes uniform length lead wires, an equalizer hub, and Applicant's claimed wiring configuration.

### **Grouping of Claims**

The claims of the group, claims 1 through 11 inclusive, do not stand or fall together.

## Argument

### **1. The Examiner's Final Rejection is Inappropriate Because the Grounds for Rejection are Unclear and Incomplete**

Upon making a final rejection, the examiner must carefully consider the record and clearly develop and reiterate the grounds for rejection so that the Appellant is able to evaluate the advisability of an appeal. *MPEP* § 706.07. The Examiner may only incorporate previous Office Action statements by reference where they have been set forth in complete detail and even so, the Examiner should include a rebuttal of any arguments raised in the Appellant's reply. *Id.*

After issuing an election of species requirement in the First Office Action mailed on February 6, 2003, the Examiner rejected Appellant's election of claims 1-11 under 35 U.S.C. 102(b) as anticipated by Hunte '499 stating only the following basis for rejection in the Second Office Action mailed May 15, 2003 in reply to Appellant's election:

"Hunte discloses an electrical source (left hand side of 156 in Fig. 5), an equalizer hub (right hand side of 156 in Fig. 5), light fixtures (150a...150c) are of uniform length, a transformer (156), and Fig. 5 shows all the wiring configuration as disclosed in the claimed limitations."  
(See Office Action ¶ 6 dated May 15, 2003 )

In response, Appellant traversed the Examiner's rejection arguing that Hunte '499 failed to disclose the elements of an equalizer hub, light fixtures having lead wires of uniform length and the wiring configuration disclosed in Appellant's claimed limitations. (See Response dated November 17, 2003) In addition to submitting arguments, Appellant provided the Examiner with persuasive evidence supporting its position that the right hand side of 156 Fig. 5 of Hunte '499 does not disclose Appellant's claimed equalizer hub. *Id.* at p. 2. The Examiner's reply to Appellant's arguments was a Final Rejection wherein the Detailed Action merely repeated word for word the above-referenced grounds for rejection made in the May 15, 2003 Office Action without any response to Appellant's arguments other than that they had been considered but were not persuasive. (See Office Action dated January 30, 2004)

Appellant attempted to seek clarification of the grounds for rejection by submitting a request for an Interview After Final Rejection along with an Interview Agenda. In response to Appellant's request the Examiner denied a formal interview citing to a portion of Hunte '499 not relied upon in the previous Office Actions stating it would "reasonably teach one of ordinary skill in the art the limitation 'light fixtures [having] uniform length.'" (See Interview Summary dated April 7, 2004) Furthermore, the Examiner offered a case entitled *In re Wright*, 569 F.2d 1124, in support of his assertions that Hunte '499 would teach the above-referenced limitation. *Id.*

It is well settled that a prior art reference may "reasonably teach to one of ordinary skill in the art" Appellant's invention, however, unless the Examiner establishes the prior art also discloses each element of Appellant's invention, anticipation under 35 U.S.C. § 102(b) is not established. If it is the Examiner's contention that Appellant's invention is obvious under 35 U.S.C. § 103, the Examiner must clearly state this as a basis for rejection and allow the Appellant an opportunity to respond to the rejection. Appellant is now uncertain as to whether it is Appealing a Final Rejection based solely on anticipation under 35 U.S.C. § 102(b) as recited in the previous Office Action or a newly raised grounds for rejection based on obviousness which was not asserted by the Examiner until an informal phone conversation several months after the Final Office Action was issued. Since the Examiner has failed to clearly develop the basis for rejecting the application, Appellant has not been given a full and fair opportunity to prosecute its application before the patent office. Accordingly, the Final rejection is inappropriate and Appellant should be given a reasonable opportunity to respond to the Examiner's newly raised grounds for rejection.

**2. The Examiner Inappropriately Relies on *In re Wright* by Basing a 35 USC 102(b) Rejection on What the Hunte '499 Specification Would Teach One of Ordinary Skill in the Art**

As previously discussed, in response to the Appellant's interview Agenda submitted March 29, 2004, the Examiner refused a formal oral interview and submitted the following comments in the Interview Summary dated April 7, 2004:

"In combination of Figs. 4-5 and col. 5, lines 15-23 would reasonably teach one of ordinary skill in the art the limitation 'light fixtures [having] uniform length' presented in the interview agenda dated 3/29/2004."

The Examiner cites to *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977), in support of its determination. In *In re Wright*, the court determined that the Solicitor's comparison of dimensions in applicant's drawings and prior art drawing figures wherein no reference was made in the prior art specification that the drawings were to scale was of little value. 569 F.2d at 1127. The court however found the patent suggested the desirability of a particular length in the specification therefore the length would have been obvious to one of ordinary skill in the art. *Id.*

Appellant respectfully submits that the rejection at issue in *In re Wright* was one of obviousness under 35 U.S.C. § 103. *Id.* at 1126. It was therefore appropriate for the court to consider what the prior art specification and drawings teach or suggest to one of ordinary skill in the art. In contrast, here, the ground for rejection is based on anticipatory prior art under 35 U.S.C. § 102(b). Accordingly, in order to establish anticipation, each and every element of Appellant's invention must be found in the prior art in order for the prior art reference to serve as a basis for rejection. A mere suggestion of an element found in the specification of the prior art does not sufficiently establish anticipation under 35 U.S.C. § 102(b).

Even assuming *arguendo* that the Examiner's reliance on the language in Column 5, lines 15-23 of Hunte '499 in rejecting the application under 35 U.S.C. § 102(b) is appropriate,

Appellant respectfully submits Column 5, lines 15-23 neither recites nor suggests Appellant's claimed limitation of "wire leads being of uniform length." Instead, Column 5, lines 15-23 of Hunte '499 recites the following:

The reflector 148 has an outer concave reflective surface 148a and three centrally located apertures, one shown at 148b, through which extend three incandescent light bulbs 150. The light bulbs are in turn releasably held in fixtures 151 mounted on a main circuit board 152. The circuit board 152 contains switching circuitry, and a light sensor 156 which is mounted on a sub-circuit board 154 adjacent to the main circuit board 152 and through an aperture 112g in housing 112.

Column 5, lines 15-23 of Hunte '499 does not make any reference to the wires associated with the light fixtures 150a...150c, much less a desirable length for the wires. Appellant fails to see, and the Examiner has not offered any explanation, as to how this excerpt of the Hunte '499 specification teaches the limitation found in Claim 11 of the Application of "wire leads being of uniform length". Accordingly, the Examiner has misapplied the law and incorrectly relied on the *In re Wright* case in support of its rejection under 35 U.S.C. § 102(b).

### **3. Hunte '499 Does Not Disclose or Suggest All the Claimed Limitations of The Instant Invention**

Anticipation under 35 USC § 102(b) is only appropriate "if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "the identical invention must be shown in as complete detail as is contained in the...claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Appellant respectfully submits Hunte '499 does not disclose Appellant's claimed limitations of uniform length lead wires, an equalizer hub and wiring configuration therefore a final rejection under 35 USC § 102(b) is inappropriate.

**a. Appellant's Claimed Limitation of Uniform Length Lead Wires is not Found in Hunte '499**

Appellant respectfully submits the Examiner misquotes the Appellant's claimed limitation found in Claim 11 of "wire leads being of uniform length" in stating that Hunte '499 discloses that the "light fixtures are of uniform length." The "uniform length" recitation by Appellant provides a limitation on the length of Appellant's claimed wire leads, not the light fixtures themselves.

The Examiner cites to Hunte '499 elements 150a, 150b and 150c of Fig. 5 in support of his incorrect contention that Appellant's limitation of "uniform length light fixtures" are disclosed by Hunte '499. It is well settled that portions of features in drawings are not evidence of actual proportions when drawings are not to scale. *Hockerson-Halberstadt, Inc. v. Avia Group Intel.*, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000)("[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue"); See Declaration of John Reeves submitted herewith; MPEP §2125. There is no suggestion in Hunte '499 that the elements in Fig. 5 are drawn to scale, to a specific dimension, or are uniform.

Figure 5 of Hunte '499 does not provide a length restriction with respect to the light fixtures or any wires associated with the light fixtures. In contrast, wire leads of uniform length are explicitly claimed and an essential element in the present application. Appellant specifically recites in Claim 11 "said wire leads connected to one or more light fixtures, and said wire leads being of uniform length." In addition, Appellant's specification discloses that the wire leads (32) are of equal length such that each fixture (3) is an equal distance from the transformer (12). Hunte '499 does not refer to wire leads, much less the length of wire leads nor do the claims or specification recite that the light bulbs (150) are to be located a uniform distance from the transformer (156). Accordingly, Appellant's claimed limitation of "wire leads being of uniform



length” is not expressly or inherently found in Hunte ‘499 therefore anticipation under 35 USC § 102(b) has not been established.

**b. Appellant’s Claimed Limitation of an Equalizer Hub is not Found in Hunte ‘499**

The Examiner cites to the “right hand side of 156 in Fig. 5” in both the Second and Final Office Actions in support of his contention that Hunte ‘499 discloses an equalizer hub as claimed by Appellant. In response to the Second Office Action, which was the first time the Examiner raised this basis for rejection, Appellant presented arguments and evidence showing that element (158) found on the “right hand side of 156 in Fig. 5” is a full bridge rectifier not an electrical connection hub designed to allow multiple connections to a single home run wire as claimed and described in Appellant’s invention. (See Response dated November 14, 2003) Furthermore, if the Examiner’s reference was meant to be to everything in the schematic diagram between element (156) and the light bulbs (150a, 150b, and 150c) the diagram fails to depict connecting one or more light fixtures separately to the home run wire coming from the transformer. In reply to Appellant’s arguments, the Examiner merely repeats the language from the Second Office Action in the Final Office Action and states Appellant’s arguments were not persuasive without offering an explanation as to why Appellant’s argument was not persuasive or clarification of the exact area to which the “right hand side of 156 in Fig. 5” refers.

Although the Examiner has not clarified which element found in Hunte ‘499 is an equalizer hub, Appellant argues before the Board that element (158) found to the right of (156) in Fig. 5 is not an equalizer hub and further that even the combination of the elements to the right of (156) in Fig. 5 of Hunte ‘499 do not depict Appellant’s claimed equalizer hub (20). The equalizer hub claimed in the application provides a common connection point which facilitates the addition and/or removal of light fixtures without disrupting the uniformity in voltage to other light fixtures. Each light fixture (30) is directly coupled to a home run wire (14) without passing

through another connection or fixture by running wire leads (32) from the fixtures (30) to connectors (22) found in the equalizer hub (20). (Specification, page 6, lines 9-15).

In contrast, the right side of Fig. 5 of Hunte '499 depicts a control circuit (154) which monitors the ambient light intensity by switching on the light fixtures 150a, 150b and 150c when the light intensity falls below a threshold level however does not facilitate the addition and/or removal of the light fixtures without disrupting the uniformity in voltage to other light fixtures. (Specification, Col. 5, lines 57-60). In order to achieve this, the signal traveling between the transformer (156) and the light fixtures (150a, 150b and 150c) in Fig. 5 passes through several points throughout the circuit before being received by the terminal conductors for the light fixtures (150a, 150b and 150c). Specifically, power received through the step-down transformer (156) first passes through the full bridge rectifier (158) the rectified signal is further smoothed by a capacitor (160) the signal then passes through the circuit to a voltage divider and resistors, one of which (175) is ultimately "joined to a Darlington driver transistor (182) and a bias resistor (183). The collector of driver transistor (182) is coupled to a conductor (186) which forms the terminal conductors for the three incandescent lights 150a, 150b and 150c." (Specification, Col. 5, lines 25-50, 51-55). Certainly, the above disclosed elements to the right of (156) in Fig. 5 do not provide for a direct connection between the light fixtures (150a, 150b and 150c) and a common connection point which facilitates the addition and/or removal of light fixtures without disrupting the uniformity in voltage to other light fixtures. Accordingly, the "right hand side of (156) in Fig. 5" is not the same element as Appellant's claimed equalizer hub.

**c. Appellant's Claimed Wiring Configuration is not Found in Hunte '499**

As discussed above, the right side of Fig. 5 depicts each of the light fixtures (150a, 150b and 150c) sharing the same leads running from the power source and shows many electrical connections between the power source and the light fixtures (150a, 150b and 150c). In contrast

to the multiple electrical connections between the power source and the light fixtures disclosed in Hunte '499, Appellant's invention teaches light fixtures directly coupled to the home run wire without intervening connections. Even one such additional connection teaches away from the instant invention therefore Appellant's claimed wiring configuration is not disclosed by Hunte '499.

#### **4. Supplemental Authority in Support of Appeal**

Appellant filed an appeal brief on the above-referenced application on August 3, 2004. At issue on appeal is whether claims 1-11 are patentable under 35 U.S.C. § 102(b) over Hunte '499. More specifically whether Hunte '499 includes uniform length lead wires, an equalizer hub, and Appellant's claimed wiring configuration. The Examiner rejected the above-referenced application stating that Appellant's claimed uniform length lead wires are disclosed in Fig. 5 of Hunte '499. Fig. 5, however, is a schematic and no reference was made in the Hunte '499 specification that the drawings were to scale or that the wires shown in the figure were of uniform length. Appellant cited to authority in its brief stating that schematic drawings do not represent precise proportions unless the patent expressly provides that such proportions are intended. As further support, Appellant would like to submit before the Board additional authority recently decided by the Federal Circuit on this issue. In *Nystrom v. Trex Co.*, 71 USPQ2d 1241 (Fed. Cir. 2004), the Federal Circuit reversed a ruling of invalidity by the district court based on a model constructed from prior art drawings. Neither the model nor the dimensions required to construct the model from the drawings were disclosed within the patent itself. The Federal Circuit determined the district court failed to properly apply *Hockerson-Halberstadt*, 222 F.3d 951, 956 (Fed. Cir. 2000) and *In re Wright*, 569 F.2d 1124, 1127 (CCPA 1977) which stand for the principle that "arguments based on drawings not explicitly made to scale in issued patents are unavailing." *Nystrom v. Trex Co.*, 71 USPQ2d at 1250. Accordingly,

the district court's judgment of invalidity of the patent based on anticipation was reversed.

Appellant respectfully submits herewith as Exhibit A, a true and correct copy of *Nystrom v. Trex Co.*, 71 USPQ2d 1241 (Fed. Cir. 2004).

Appellant respectfully submits in light of the Federal Circuit's decision in *Nystrom v. Trex Co.*, it would be erroneous for the Examiner to find Appellant's claimed uniform length lead wires are disclosed by Hunte '499 based on the wiring depicted in Fig. 5. Accordingly, Appellant respectfully submits Hunte '499 does not disclose Appellant's claimed limitation of uniform length lead wires therefore a final rejection under 35 USC § 102(b) is inappropriate.

### **Conclusion**

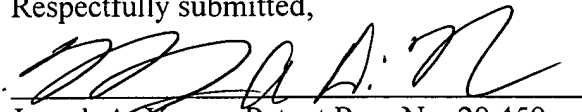
For the foregoing reasons, it is submitted that claims 1-11 of the instant application are patentable over Hunte '499. Therefore, Appellant respectfully solicits the Board to reverse the decision of the Primary Examiner finally rejecting claims 1-11 and direct the Examiner to pass the application to issue.

### **Fee Calculation**

The fee of \$165.00 to cover the fee for filing Appellant's brief in support of appeal has been previously paid. Please charge any additional fees required or credit any excess fee paid to Deposit Account No. 25-0050.

Dated: November 19, 2004

Respectfully submitted,



Joseph A. Yanny, Patent Reg. No. 29,459  
Michael A. DiNardo, Patent Reg. No. 42,487  
YANNY & SMITH  
1925 Century Park East, Suite 1260  
Los Angeles, CA 90067  
Telephone: (310) 551-2966  
Facsimile: (310) 551-1949  
Attorneys for Appellant

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## APPENDIX

I claim:

1. A method for wiring an electrical lighting system comprising:  
providing an electrical source;  
5 connecting said electrical source to an equalizer hub; and  
connecting said equalizer hub to one or more light fixtures.
2. The method of claim 1 further comprising connecting said electrical source to a transformer  
and connecting said transformer to said equalizer hub.
3. The method of claim 2 further comprising connecting a homerun wire from said  
10 transformer to said equalizer hub.
4. The method of claim 1 further comprising connecting the equalizer hub to a wire lead on  
each of the one or more light fixtures.
5. The method of claim 4 wherein the wire leads on each of said light fixtures are of uniform  
length.
- 15 6. The method of claim 1 further comprising connecting said electrical source to two or more  
connectors contained in said equalizer hub.
7. The method of claim 6 further comprising connecting the connectors to said one or more  
light fixtures.
8. A method for wiring an electrical lighting system comprising:  
20 providing an electrical source;  
connecting said electrical source to a transformer;  
connecting said transformer to two or more connectors contained in an equalizer hub; and  
connecting said connectors to each of one or more wire leads, said wire leads connected  
to one or more light fixtures.
- 25 9. The method of claim 8 further comprising connecting a homerun wire from said  
transformer to said two or more connectors.
10. The method of claim 8 wherein the wire leads on each of said light fixtures are of uniform  
length.

- 1     11.     A method for wiring an electrical lighting system comprising:
- providing an electrical source;
- connecting said electrical source to a transformer;
- connecting said transformer to a homerun wire;
- 5       connecting said homerun wire to two or more connectors contained in an equalizer hub;
- and
- connecting said connectors to each of one or more wire leads, said wire leads connected
- to one or more light fixtures, and said wire leads being of uniform length.

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VOLTAGE DROP

**DECLARATION OF JOHN REEVES IN SUPPORT  
OF APPELLANT'S APPEAL BRIEF**

1. I am a U.S. citizen residing in Temecula, California. I have personal knowledge of all facts stated in this declaration and if called as a witness, could and would testify competently to them under Oath.
2. I am an electrical engineer. I received a Higher National Certificate in Electrical Engineering with Endorsements in Electronics (equivalent to between a BSEE/MSEE) from Southwark Polytechnic in London, England in 1959. I have worked in the field of electrical engineering since 1956 for various engineering firms including Westinghouse Electric, Garatt Air Research, LH Research, California Instruments, Astec America, Mesa Power, and Hewlett Packard. As an electrical engineer I have prepared and reviewed hundreds of schematic drawings.
3. I have reviewed the Office Action dated January 30, 2004, Figure 5 of Hunte U.S. Patent No. 4,937,499, as cited in the Office Action, as well as, Nate Mullen's U.S. Patent Application No. 09/738,024.

4. Based upon my investigation, experience, and analysis, it is my opinion that the light fixtures, elements 150a, 150b and 150c, and the connected lines and structures cited by the Examiner in the schematic diagram labeled Figure 5 of Hunte U.S. Patent No. 4,937,499, do not represent wire leads of uniform length.

5. In my experience and understanding, schematic drawings are not drawn to scale and the lines in a schematic drawing do not represent the precise proportions of the structures. The purpose of schematic drawings is to represent how connections are made in an electrical system or circuit. It is not a purpose of a schematic drawing to represent the length of wires or the size of electrical components in an electrical system or circuit.

I DECLARE under penalty of perjury under the laws of the United States that the foregoing is true and correct and based upon my personal knowledge.

EXECUTED this 27<sup>th</sup> day of July, 2004 at Temecula, California.

By: \_\_\_\_\_

John Reeves